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ABSTRACT

As online learning becomes a mainstream phenomenon in courses with face-to-face components as well as those conducted at a distance, a number of frameworks have emerged to describe the role and attributes of the effective online teacher. Effective teaching and course management skills for rapidly changing environments are one aspect of the requirements. This paper examines some recently developed frameworks for effective online teaching and relates these to published case studies describing a range of courses and situations. The conclusion is that current frameworks provide a general though high-level description of what is involved in effective online teaching. As such, they provide a useful starting point for further analysis of the issues that determine the quality of online courses and teaching. Analysis of the following framework elements in the context of case studies are presented: knowledge of the online process; technical skills of online teaching; online communication and moderation skills; content expertise; confidence and motivation to teach online; contextual influences on success of online learning. This in-depth analysis of teaching and learning issues will provide the basis of guidelines for best practice. It is further noted that frameworks for effective institutional support are equally instrumental in successful implementation. (Contains 33 references.) (Author/MES)

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EFFECTIVE ONLINE TEACHING – HOW FAR DO THE FRAMEWORKS GO?

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Abstract

As online learning becomes a mainstream phenomenon in courses with face to face components as well as those conducted at a distance, a number of frameworks have emerged to describe the role and attributes of the effective online teacher. Effective teaching and course management skills for rapidly changing environments are one aspect of the requirements. Online teachers must also be recognized, to some extent, as agents of change within their own institutions. This is particularly true in respect of the ability to develop the receptive cultures and communities of learning that have proved prerequisite to success in online learning environments. This paper examines some recently developed frameworks for effective online teaching and relates these to published case studies describing a range of courses and situations. The conclusion is that current frameworks provide a general though high level description of what is involved in effective online teaching. As such, they provide a useful starting point for further analysis of the issues that determine the quality of online courses and teaching. This in depth analysis of teaching and learning issues will provide the basis of guidelines for best practice. It is further noted that frameworks for effective institutional support are equally instrumental in successful implementation.

Keywords

online teaching, educational models, instructional design, computer mediated communication

Introduction

Development of various forms of online courses and activities has brought the higher education community to a point where attributes and criteria for effective online teaching can be formally and reliably identified. A number of frameworks describing the roles and attributes of effective online teachers can now be found in the literature. This paper draws on publications from a small but representative sample of eminent authors as the basis for analysis and discussion.

Existing Frameworks

Using a learning model as the focal point for defining teaching requirements, the analysis begins with a description of various stages that online learners must progress through. Salmon's Five Stage Model of Online Teaching and Learning is based on the medium of computer mediated communication (CMC), (Salmon, 2000). It is a consolidated model derived from an action research process and is described together with student actions and responsibilities in Table 1.

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Stage	Activities
1. Access and motivation	Individual access and motivation to use CMC, set up and development of skills to use technology tools, formation of expectations of CMC
2. Online socialization	Establishment of online identity and a basis for interaction with others, fluency in use of tools and development of online culture.
3. Information exchange	Exchange of course related information, development of strategies for dealing with quality, volume and frequency of communication, setting orientation to task.
4. Knowledge construction	Course related group discussions, interactions and collaboration, establishment of common understandings, exposure to multiple perspectives and development of personal meaning.
5. Development	Achievement of personal goals through interaction with the established system of communications, integration of CMC with other forms of learning, reflection on the learning process, development of autonomy and removal of scaffolding.

Table 1: Five stage model of online teaching and learning

Another framework published by Collis (1996) defines six vital instructional principles for adult education. These principles are entirely consistent with Salmon's (2000) model although framed in terms of the teaching learning process and characteristics of learning environments:

- Both the learner and the educator play an active and unique role in the educational process.
- The process of creatively acquiring knowledge involves human interaction and learner competence that are developed and evaluated within a communication oriented educational model.
- Contemporary models of learning support learner-centred instruction that encourages self-assessment, personal reflection and elicits learner articulation of their ideas.
- The learning environment should maximize meaningful and reflective interactions while providing a variety of opportunities for feedback.
- Creating instruction that promotes learner self-regulation and individual responsibility is the product of educators who are academically well prepared and monitor the quality of student work.
- Adult educators recognize that students want to move efficiently through their studies in both time and energy; students do not automatically have good study skills, discipline or motivation.

In order to support the various stages of learning design, process and assessment defined in these frameworks, Salmon (2000) identifies the following competencies for online teachers:

Understanding of the online process;
Technical skills;
Online communication and moderation skills;
Content expertise;
Confidence and motivation to teach online.

Different aspects of these competencies are described under the dimensions of confidence, constructivist, developmental, facilitation, knowledge sharing and creative elements. Following publication of this work, the author participated in an international workshop, the product of which was a consolidated framework summarizing competencies for online teachers (Goodyear, Salmon, Spector, Steeples & Tickner, 2001) as shown in Figure 1.

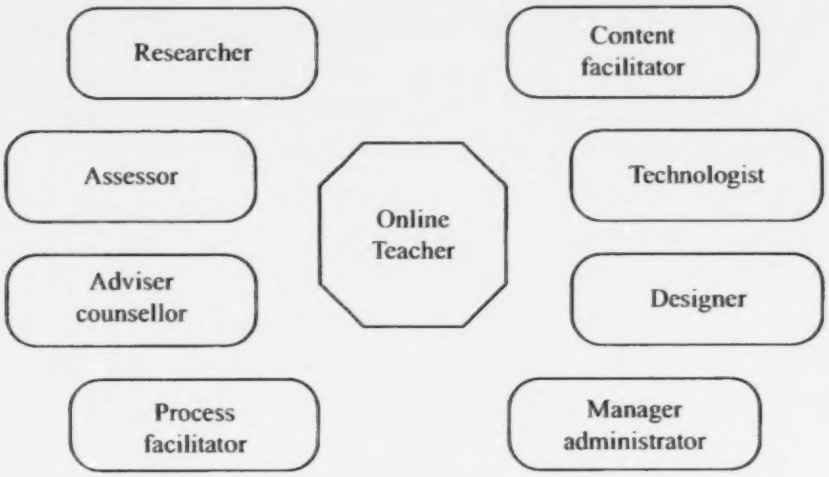

Figure 1: Roles of online teachers

A review of some case studies is now presented to illustrate how these principles apply in practical situations. Many of these studies are drawn from an international online tutoring workshop that was hosted by a Scottish Universities consortium during 2000 (online). Others are gleaned from the current literature.

Experiences Described – The Online Workshop

A summary of principles derived from case studies presented during the online workshop follows. One case described a course designed for teaching staff to learn through experience what the active and unique roles of teachers and students identified by Collis (1996) in the online educational process mean in practice. The objective of training effective online teachers was articulated by first exposing the trainees to models of effective tutor behavior from the student perspective. This experiential approach is increasingly common and has proved to be highly effective in a range of different settings. In this case, the human interaction process was kick-started by posting of personal introductions and continued through on-line discussion of course related topics. Initial orientation in the use of online study habits was followed by timely feedback and support provided by the teacher. Collaborative learning was promoted through team assignments where knowledge acquisition formed part of the group task. Elements of problem solving completed the educational design and the asynchronous medium allowed time for reflection before submission of work to members of the study group or to the tutor. Apart from an almost textbook example of application of Collis' (1996) model, the main principle highlighted in this study was having a well qualified and enthusiastic teacher actively involved in the process, available for all support needs and to overcome technical or psychological barriers to success. Although the Goodyear et al. (2001) model addresses all the functional aspects, enthusiasm is a critical attribute that is not specifically identified.

A similar case described a "New Technology of Learning" masters level module, where the convenience of access for students with work and family commitments provided the rationale for on-line study. This type of access opportunity is recognized as providing a strong incentive for students to learn new skills and to cope with an unfamiliar and sometimes frustrating study environment. The essential skills identified for teachers on this course also conform to the models, i.e.:

- Enough technical skills to manage the platform, to use the tools effectively and to help students develop appropriate study skills for the on-line environment;
- Good moderation skills for on-line discussion and the ability to make timely, appropriate and constructive interventions;
- Motivation to engage in ongoing professional development to keep abreast of new developments.

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Another case emphasized the educational aspects by stressing the need for tutors with the ability to define and apply established pedagogical principles and to embellish these with suitable technology tools. It was also considered important to provide adequate materials and options to accommodate different learning styles.

A case presented by Gilly Salmon, author of the main framework examined in this paper, also related to experiential training of tutors for on-line courses. Key aspects of the work presented as a case study are elaborated and generalized in the book "E-Moderating, The Key to Teaching and learning Online", (Salmon, 2000), and Collis' (1996) six principles are reflected in this work. The significant roles and responsibilities of online teachers were defined as follows:

- Helping students to set clear expectations and goals, guiding active and experiential learning in a flexible learning environment so students can choose to follow preferred paths without risking losing track;
- Applying constructivist principles through interaction with fellow tutors, moderators and software tools;
- Helping students to build both knowledge and software skills in a supported environment;
- Ability to use familiar metaphors to explain unfamiliar processes and tools;
- Ability to strike the right balance between self managed learning and the need for intervention and support, i.e. to provide scaffolding;
- Knowledge of strategies to promote reflection and interaction.

A Review of Online Teaching Frameworks in Use

It may be concluded that the case study experiences in the online workshop correspond well with the published frameworks. However, it is clear from the following literature based examples that greater depth of definition of the skill set for online teaching is required. To be fair, frameworks are designed to be general and high level, not to address implementation details or the specifics of individual cases. However, the need to derive grounded theory for effective online teaching cannot be served by frameworks until more detailed definitions of the elements are produced. Analysis of framework elements in the context of cases studies now follows.

Knowledge of the Online Process

Gunn and Barnett (2000) present a case study describing one early adopter's relative success in online teaching. A course in "Information Technology and Education" based on active, experiential learning principles offers significant opportunities for students to pursue their own professional interests within the structure of the learning environment. The design reflects Herrington and Oliver's (2000) criteria for authentic learning environments. The course content is generated and discussed collaboratively. Major assignments can be tailored to reflect individual interests. An additional element of the assessment is formative and computer based. The experience of the teacher in pedagogy, understanding of the online process and effective use of technology for learning complies with the attributes identified in the frameworks.

Two major challenges addressed in this case were the risk that online learning can be depersonalized and that it can lack sufficient interaction between students, their peers and lecturing staff if appropriate strategies are not used. Secondary considerations afforded recognition to the fact that computer mediated communication tools offer great potential to overcome distance and increase flexibility in terms of time and place, but their use within a course does not guarantee that any such benefits will be achieved. Summative evaluation findings showed that many benefits were achieved in this case because the technology tools were used to support instructional strategies appropriate to the level and capabilities of the students. They actively promoted acquisition and practice of the skills defined as the learning outcomes and applied a philosophy of learning that was entirely reflective of the course objectives. It may be argued that this approach would have lead to successful outcomes regardless of the tools or technology used. The challenge was to use unfamiliar and

largely unproven tools and methods of flexible learning to create a culture and community of learning that required a high degree of interaction and personalization to achieve the objectives.

A less positive outcome of this study demonstrates that application of all the accepted principles does not necessarily lead to successful outcomes in every respect. Because the course required a high level of personal interaction, it was time consuming for students and labour intensive for teaching staff. It was (reluctantly) concluded that the level of interaction could not be managed with large numbers of students without strategies to devolve some responsibility from the lecturer to autonomous groups of students. Different options are now being tested, although current thinking is that it may compromise one principle of effective online learning, specifically, that of providing models of expert behavior for learners to follow. If there is no way to keep student to staff ratios low, and a high level of interaction is required, the challenge of designing effective online strategies will be significant. The main conclusion about the frameworks drawn from this case is the simple fact that their application may prove to be unsustainable for practical reasons. The overall impact of situational factors is discussed in a later section of this paper.

Technical Skills for Online Teaching

Benseman (2000) defines the technical skills required as similar to those identified in the frameworks, and proposes that many of the lessons learned with old technology still apply. Bates (1995) warns that better technology does not necessarily mean better education and Benseman further observes that the technology used in most educational settings is not leading edge, although it is advancing and student skill requirements increase accordingly. Thus the requirement for tutors to be familiar with technology extends from the existing and available to newly emerging technologies so they can assist students with development of appropriate skills in the use of tools as they come into common use. By way of illustration, Benseman (2000) reported that in 1995 more than half the students in one project had never or occasionally sent file attachments. Now this is a common action that all basic users are familiar with. The teacher's skill is not just to support students in development of new technology skills, it is also in knowing when they can be prompted to move on to a new level, such as requiring internet access as pre-requisite to entry on a course. This brings up the need for institutional readiness, as discussed below, so facilities and support can be put into place to make such expectations realistic. Many universities now distribute CDs with basic software such as a current version of a browser, email program, acrobat reader, site licensed office products etc. to address technical requirements.

As well as issues of technical readiness, Benseman (2000) identifies cultural and conceptual shifts associated with online learning. This reflects the need for teachers to be agents of change, to motivate students to use new tools and methods, to help build confidence and understanding of both potential and limitations, and to overcome fears about technology and the unfamiliarly high level of visibility of individual contributions.

Online Communication and Moderation Skills

The statement in Salmon's framework that effective teachers require "online communication and moderation skills" offers a very high level description of a complex requirement. In addition to gender differences in communication style identified in the literature, (Herring 1996; Richardson & French 2000; Yates 2001) there are many levels and types of discussion defined in the educational literature. Some predate online learning, (Pask, 1976; Collis, 1991) while recent work has that specific focus, (Reibel 1994; Newman, Webb & Cochrane, 1995; Brown 1997; Quinn, 1997; Hara, Bonk & Angeli, 2000).

Richardson and Turner (2001) evaluated the use of virtual learning environments and developed guidelines for discussion moderators based on the experience. Their paper reports on the interactive systems that provide students with the opportunity to communicate and discuss their courses asynchronously. The obvious differences in virtual communication, i.e. the lack of visual, aural and

kinesthetic cues are acknowledged. The absence of socio-linguistic conventions to guide the initiation, development and closure of discussions was also identified. The area was clearly an uncharted one that caused frustration and isolation among students. Effective communication did not happen because of the students' unfamiliarity with the process and the absence of "signposts" for conducting online discussion. The following guidelines were developed to address these problems:

- Tutors clearly state the purpose of the discussion with learning outcomes and individual benefits in mind;
- Initial raising of metacognitive awareness to help clarify expectations;
- Negotiation of ground rules to clarify expectations and define acceptable behavior;
- Formal and informal links between discussion and assessment are made clear to students;
- Guidelines on number, length and assessment criteria for contributions are provided;
- Tutors initiate discussions and students contribute according to agreed criteria;
- Tutors model facilitation of online discussion until students are confident enough to proceed independently;
- Students communicate with tutors and suggest appropriate topics for discussion;
- Tutor acts as moderator;
- Tutor continuously evaluates and gives constructive feedback on academic merit of student contributions;
- New topics outside the main theme are taken to separate discussion areas;
- Tutor advises students about time of presence in online discussion areas;
- Time frame for discussions and boundaries are set;
- Feedback to all participants follows closure of discussion.

At a deeper level of analysis, Sherry, Billig and Tavalin (2000) deconstruct dialogue and conversation as an educational tool, and in doing so, underline the need for online teachers to understand and develop the ability to lead different types of discussion for course related purposes. The requirement is for teachers not just to be able to moderate discussions but to understand the educational merits of different types of conversation and different levels of learner contribution as learning proceeds. The stages of learning identified by these authors are comparable to Perry's (1970) levels of maturity in learning and reflect similar types of understanding, that is, dualistic, early and late multiplistic and contextual relativism. Progression through these stages is described by Sherry as "The learning curve for technology based conversation". Against this background, the task of initiating and moderating online discussions involves significantly more than developing conventions, applying rules of netiquette and keeping students on task. The underlying knowledge of educational levels, ability to link learning activities to specific outcomes and subject areas, and progression from lower to higher levels of thinking is also assumed. An example cited by Sherry of the means to promote higher learning is "conversation" within a Rich Environment for Active Learning, (REAL), (Grabinger & Dunlap, 1995). The definition of REALs illustrates that they are based on constructivist values and theories, include collaboration, personal autonomy, active engagement, personal relevance and pluralism.

Content Expertise

In a general discussion of the skills of effective teachers (Barnett & Hodson, 2000) identify content knowledge as just one of five dimensions of the required expertise. The definition includes academic and research knowledge, professional knowledge, classroom knowledge and pedagogical content knowledge. In summary, this requires application of academic knowledge to build research-based knowledge of course related topics. Professional knowledge ensures courses fit well with university and departmental regulations. Classroom knowledge relates to awareness of the characteristics of a new teaching and learning environment and pedagogical content knowledge is required to define the best ways to teach content in a given environment. The basis of this definition is both contemporary and constructivist (Honebein, Duffy & Fishman, 1993; Reibel, 1994; Grabinger & Dunlap, 1995), yet rooted in longstanding traditions of liberal education. Despite the current evolutionary nature of the technology in focus, the underlying educational

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theory has been developing for nearly half a century. Principles such as going "beyond the information given" (Bruner, 1957), and the use of argument and reasoning (Toulmin, 1958; Toulmin, Rieke & Janik, 1984), remain significant to the achievement of objectives and the design of learning activities while the ability of new media enhances opportunities to achieve these ends. The issue of content expertise is thus more complex than the framework implies.

Confidence and Motivation to Teach Online

A review of current practice shows that effective online teaching practice may not be implemented despite the existence of policies, quality assurance standards and guidelines for effective practice. Potential obstacles include low motivation and lack of confidence. This reflects the situation in the 1990s where new education technologies were available and proving successful in some cases, but not entering mainstream teaching practice (Darby, 1992). The motivation behind moves to online learning can bring a significant influence to bear on both the effectiveness of the approach adopted by teaching staff and the learning design and outcomes that will result. Jaffe (1998) proposes that high success rates resulting from efforts of early adopters may be attributed to the fact that they opted for innovation as a means to improve their teaching and the learning of their students. In many cases there were significant obstacles to overcome, i.e. low institutional support, policies that reflect traditional teaching situations and lack incentives and rewards for innovators. Jaffe (1998) also suggests it is probably no coincidence that many early adopters were already excellent teachers in traditional mode. The rise up a learning curve with new technology and educational methods was therefore not motivated simply by a need to comply with institutional strategic objectives. The fact that online learning has become 'flavour of the month', is now the key to unlock sources of funding and increasingly, to gain academic recognition, has considerably increased the range of motives behind developments.

It may be argued that motives behind a move online have little direct impact on effectiveness of online teaching. However, it may also be argued that motivation is an important element of effectiveness in most learning situations so would certainly impact on Salmon's (2000) fifth dimension of confidence and motivation to teach online.

Contextual Influences on Success of Online Learning

Jaffe (1998) reminds us of the reality of higher education as a social institution, which means that organizations are not rational, adaptive entities that respond logically to demands placed on them by the rapidly changing environment. Forces that spell radical change to professional identity and practice and the accompanying loss of security may be met with a range of resistance strategies. The shift to online learning is variously regarded as a promise, a threat, irrelevant to some disciplines and unnecessarily time consuming. Any of these conceptions is unlikely to lead to easy adoption of effective online learning strategies. It is usually where systematic change management, development and support strategies are adopted that take up rates are high across the board. From a holistic viewpoint, the phenomenon of online learning cannot be separated from the situation it exists within. In addition to criteria for effective online teaching therefore, an institutional support model for flexible learning, such as that presented by The US Institute for Higher Education Policy (2000) is required to create conditions that support such developments. A list of twenty-four benchmarks covers:

- Institutional support;
- Course development;
- Teaching and learning issues;
- Course structure;
- Student support;
- Staff support;
- Evaluation and assessment.

The objective of such comprehensive approaches is recognition that online learning is well placed to address pedagogical and logistical issues in a changing environment. For institutions the realization must be that online learning is a legitimate development, though one for which staff and students need intensive support, retraining and the right to define the boundaries. Finally, they must accept that increased profitability is not the most appropriate driving force behind developments (Bates, 2000).

Conclusions

A list of attributes and behaviors of effective on-line teachers distilled from the literature and case studies cited includes the following:

- Give on-line learning a human face, for example, by having an initial face to face meeting or introductions from all students;
- Help to clarify roles and responsibilities, time management techniques and expectations, i.e. provide a structure and boundaries for students to work within;
- Facilitate, moderate, motivate and promote participation;
- Demonstrate good practice, be explicit about what is good and what is excellent performance;
- Use strategies designed to include all students;
- Respond in a timely manner and give appropriate (constructive) feedback;
- Promote and assist with development of adequate technical skills to use a platform or tools;
- Base courses on the articulation of sound pedagogy and assessment practice;
- Provide adequate materials and activities to accommodate all learning styles;
- Promote and encourage self-management and responsibility;
- Evaluate, review and modify teaching practice according to feedback;
- Engage in professional development to keep up with innovations.

The developmental nature of online learning suggests that this list of attributes is not static, but will be continuously updated to reflect the appearance of new tools and techniques and the evolution of associated learning issues. This author concludes that frameworks must be accompanied by in depth analysis of attributes of effective online teachers. As well as the high level descriptions provided in the current literature, further exploration of the attributes of online teaching is required, i.e.

- Characteristics of different types and levels of educational conversation;
- Development and assessment of learning activities that promote the articulation of reasoning, knowledge and problem solving processes, where multiple perspectives are generated and respected;
- Development of strategies to resolve conflicting viewpoints and promote reflection on process and outcomes;
- Skillful prompting, refocusing and moderation;
- Provision of constructive critiques, feedback and supportive interjections to signpost and direct learning;
- Use of strategies to expand a body of knowledge and to transform thinking and personal perspectives.

The impact of contextual factors must also be built in to the frameworks if they are to be used as guidelines for implementation and criteria for evaluation. Finally, the implications for professional development must be articulated and best practice defined in this respect. Much attention is currently being paid to this area, (Creanor & Littlejohn, 2000; Herrington & Oliver, 2001). Since the bulk of research and evaluation in these areas is necessarily based on case study research, the process of generalization will be slow. The range of influential factors briefly described in this paper demonstrates that elaboration of the framework elements is already a complex task, and there can be little doubt that other factors will emerge as influential during the process of analysis. Issues such as gender and identity are already being researched. The longer term impact of a shift towards student centred and constructivist principles and the rapid emergence of faster, cheaper and more accessible technologies are two areas rife with speculation.

References

Barnett, J. & Hodson, D. (2000). Pedagogical content knowledge: Toward a fuller understanding of what good science teachers know.

Bates, A.W. (2000). *Managing technological change: Strategies for college and university leaders*. San Francisco: Jossey-Bass.

Benseman, J. (2000). Superhighway or dirt road? Moving beyond the hype with computer mediated communication. *Australian Journal of Adult and Community Education, 39* (3), 143-153.

Brown, A. (1997). Designing for learning: What are the essential features of an effective online course? *Australasian Journal of Education Technology, 13* (2), 115-126.

Bruner, J.S. (1957). Beyond the information given. *Contemporary Approaches to Cognition - A report of a symposium at the University of Colorado, May 12-14, 1955*. Cambridge, MA : Harvard University Press.

Collis, B. (1996). Does more technology mean more choice for the learner? Experiences from the TeleScopia Project. *European Vocational Training Journal, 7* (1), 13-21.

Collis, G. M. (1991). Classes of dialogue theory for the learning process: A commentary. *Computers in Education, 17* (1), 25-27.

Creanor, L. & Littlejohn, A. (2000). Preparing for online learning and teaching: A cross institutional approach to staff development in internet communication. *Journal of Computer Assisted Learning, 16* (3) 271-279.

Darby, J. (1992). The future of computers in teaching and learning. *Computers in Education, 19* (1-2), 193-197.

Goodyear, P., Salmon, G., Spector, M., Steeples, C., & Tickner, S. (2001). Competencies for online teaching: A Special Report. *Educational Technology Research & Development, 49* (1), 65-72.

Grabinger, S. & Dunlap, J. (1995). Rich environments for active learning, *ALT-J, 3* (2), 5-34.

Gunn, C. & Barnett, J. (2000). On-line learning: A quality experience. In P. Roberts & M. Chambers (Eds.), *Digital developments in higher education*. London: Taylor Graham.

Hara, N., Bonk, C.J., & Angeli, C.M. (2000). Content analysis of on-line discussion in an applied educational psychology course. *Instructional Science, 28*, 115-152.

Hara, N. & Kling, R. (1999). *Students' frustrations with a web based distance education course: A taboo topic in the discourse*. [Online]. Available: http://www.slis.indiana.edu/CSI/wp99_01.html [November 2001].

Herring, S. (1996). Gender and democracy in computer mediated communication. In R. Kling (Ed.) *Computerization and controversy: Value conflicts and social choices*, (pp. 476-489). San Diego: Academic Press.

Herrington, A. & Oliver, R. (2001). *Online learning: Professional development for the changing role of the lecturer*. Paper presented at Ascilite 2000, Coffs Harbour, Southern Cross University.

Herrington, J. & Oliver, R. (2000). An instructional design framework for authentic learning environments. *Educational Technology, Research and Development, 48* (3), 23-48.

Honebein, P.C., Duffy, T.M., & Fishman, B. J. (1993). Constructivism and the design of learning environments : Context and Authentic Activities for Learning. In M. Duffy, J. Lowyck & D. Jonassen (Eds.) *Designing environments for constructive learning*. (pp. 87-108). Heidelberg, Springer Verlag.

Institute for Higher Education Policy (2000). *Quality on the Line: Benchmarks for Success in Internet Based Distance Education*. Washington DC.

Jaffe, D. (1998). Institutionalized resistance to asynchronous learning networks. *Journal of Asynchronous Learning Networks, 2*(2). [Online]. Available: http://www.aln.org/alnweb/journal/vol2_issue2/jaffee.pdf [November 2001].

Newman, D., Webb, B. & Cochrane, C. (1995). A content analysis method to measure critical thinking in face to face and computer supported group learning. *Interpersonal Computing and Technology 3* (2), 56-77.

Pask, G. (1976). *Conversation Theory : Applications in Education and Epistemology*. Amsterdam : Elsevier.

Perry, W.G. (1970). *Forms of Intellectual and Ethical Development in the College Years*. New York : Holt, Rinehart and Winston.

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Quinn, C. (1997). *Engaging Learning*. [Online]. Available: http://www.listserv.uga.edu/cgi-bin/wa?A2=ind9701&L=itforum&P=R1356 [November 2001].

Reibel, J. (1994). *The Institute for Learning Technologies: Pedagogy for the 21st Century, Institute for Learning Technologies*. [Online]. Available: http://www.ilt.columbia.edu/Publications/papers/ILTpedagogy.html [November 2001].

Richardson, H. & French, S. (2000). *Education on-line: What's in it for women? Women, work and compulerization: Charting a course to the future*. Vancouver, BC : Kluwer Academic Publishers.

Richardson, J.A. & Turner, A. (2001). *Collaborative learning in a virtual classroom: Lessons learned and a new set of tutor guidelines*. Tomorrow's Professor Listserv [Online]. Avaliable: http://sll.stanford.edu/projects/tomprof/newtomprof/postings.html [November, 2001].

Scottish Universities Consortium. [Online]. Available: http://otis.scotcit.ac.uk/casestudy/ [September 2001]

Salmon, G. (2000). *E-Moderating, the key to teaching and learning online*. London: Kogan Page.

Sherry, L., Billig, S.H. & Tavalin, F. (2000). Good online conversation: Building on research to inform practice, *Journal of Interactive Learning Research, 11* (1), 85-127.

Toulmin, S. (1958). *The uses of argument*. Cambridge : Cambridge University Press.

Toulmin, S., Rieke, R., & Janik A. (1984). *An introduction to reasoning*, New York: Macmillan.

Yates, S. J. (2001). Gender, Language and CMC for Education. *Learning and Instruction, 11*, 21-34.

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